

III. REMARKS

In the Office Action, Claims 1-5, 7-13 and 15-20 were rejected under 35 U.S.C. 103 as being unpatentable over Haba (US 6,330,027) in view of Chu (US 5,702,059) for reasons set forth in the Action. Claims 6 and 14 were rejected under 35 U.S.C. 103 as being unpatentable over Haba in view of Chu and further in view of Shimizu (US 6,515,271) for reasons set forth in the Action.

Claim 20 depends from claim 19, and is amended to correspond with the wording of the claim 19.

The following argument is presented to overcome the foregoing rejections, and to show the presence of allowable subject matter in the claims.

Haba teaches error detection and correction mechanisms in a data transfer arrangement between a camera unit and an image processing unit. The examiner considered V sync data (Col. 6, lines 9-18) as a statistical data corresponding to that mentioned in the present independent claims 1 and 11. One essential difference between Haba and the present invention lies in the fact, that in Haba, V sync data may contain information of the gain of an AGC-element (ref. no. 104 in Fig 1 of Haba) and/or of shutter speed. However, V sync data does not contain information collected from image data (e.g, brightness value) as recited in the present independent claims. This point was noted in the previous response.

The preceding point is significant because, in the present specification, on page 3 at lines 28-32, there is a teaching of the invention in which statistical data is collected from image

data, and then is interlaced with image data on a communications channel. Further on (page 4 at lines 5-7), it is taught that this aspect of the invention introduces the advantage of faster transmission speed and reduced cost of manufacture. The statistical data (page 6 at lines 14-22) is described as being collected from the image data, and may include information on image brightness.

The fact that the statistical data can include information on image brightness, collected from the image data, contradicts the examiner's analysis of Haba, wherein the examiner states (Action on page 3 at line 5-6) that statistical data is interpreted as V sync data that is collected by the processing unit 2. This contradiction is understood from the following analysis.

Present Fig. 3 shows a camera module 301 comprising a statistical data collector 306 (present specification on page 6 at line 5). The statistical data is transmitted from the collector 306 to the electronic device 302. This is in accord with the teaching of present claim 1 that recites the transmission of data between a camera module and an electronic device, the generating of image data in the image sensor of the camera module, the collecting of statistical data from the image data, and the transmitting of the statistical data from the camera module to the electronic device.

However, in Haba, as noted by the examiner, the statistical data is obtained in the processing unit 2. Haba, (col. 6 at lines 4-17) teaches that the V sync data is used for automatic exposure (AE) and automatic focus (AF) read from the signal processing circuit 202 and supplied to the camera unit. Thus the V sync data, relied upon by the examiner, emanates in the processing

unit 2 and is sent to the camera unit 1, this being the reverse of the teaching of present claim 1 wherein the statistical data is produced in the camera module and transmitted from the camera module to the electronic device.

Therefore, it is urged that the examiner's analogy between the statistical data of the present invention and the V sync of Haba cannot stand because it leads to a result contrary to the subject matter of present claim 1 as well as to the subject matter of independent claim 11.

The examiner admits that Haba does not disclose the collection of the statistical data of the present invention (Action, middle of page 3), and relies on Chu to disclose signal processing circuitry 26 extracting an intensity history value and other data. But this does not resolve the above-noted conflict between the teaching of the present invention and Haba.

Chu teaches that a captured video image frame is analyzed and the results of the analysis are used for adjusting gain setting and exposure period of a camera. Chu provides a mechanism that determines if there is a need for changing prevailing gain setting and exposure period.

Haba and Chu do not separately or in combination teach one to first capture statistical data from image data in a camera module, and then to transmit the statistical data from the camera module to an electronic device, as is called for by the present invention.

Therefore, the combination of Haba and Chu would direct one away from the practice of the invention as recited in the present

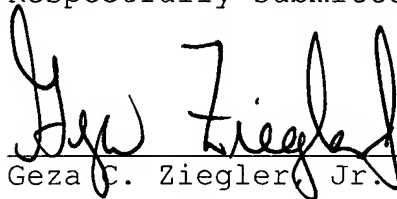
independent claims, in particular, away from the inventive teaching of capturing statistical information from image data in a camera module, and the transmission of the statistical data from the camera module to an electronic device. Upon combining Haba and Chu with the Shimizu teaching, a CMOS image sensor unit integrated with a serial data transmission means, does not resolve the foregoing contradiction between the teaching of Haba and the present invention.

New claims 21 and 22 are presented to emphasize that the collecting of statistical data from the image data is performed in the camera module, and that the statistical data includes image brightness. This is believed to distinguish the present invention further from the teachings of the cited art.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A check in the amount of \$100.00 is enclosed for the additional claim fees. The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Geza Ziegler, Jr.", written over a horizontal line.

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24 March 2004

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